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REMARKS

Entry of this Amendment is proper because it does not raise any new issues requiring further search by the Examiner, narrows the issues on appeal, and is believed to place the present application in condition for immediate allowance.

Claims 1-24 are all the claims presently pending in the application.

Claims 1-24 stand rejected on prior art grounds. With respect to the prior art rejections, claim 1 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Zhang et al. (U.S. Patent No. 6,181,711; hereinafter "Zhang") in view of Duault et al. (U.S. Patent No. 6,108,336; herein after "Duault") and Jones et al. (U.S. Patent No. 6,307,836; hereinafter "Jones"). Claims 2-7, 9-14, and 16-24 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Zhang, Duault, Jones, and further in view of Grossglauser et al. (U.S. Patent No. 5,604,731; hereinafter "Grossglauser"). Claims 8 and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Zhang, Duault, Jones, and Applicant's Admitted Prior Art (AAPA).

These rejections are respectfully traversed in the following discussion.

I. THE CLAIMED INVENTION

The claimed invention, as defined, for example, by claim 1, is directed to a statistical multiplex transmission system for use in a network which includes a first local area ATM network including a plurality of first terminal devices, a second local area ATM network including a plurality of second terminal devices, and a public ATM network connected to the first and second ATM networks.

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The invention includes a first multiplex gateway device for connecting the first local area ATM network and the public ATM network, and a second multiplex gateway device for connecting the second local area ATM network and the public ATM network. The first and second multiplex gateway devices receive ATM transmission signals from the first and second local area ATM networks, respectively. A statistical multiplexing process of the ATM transmission signals generates transmission statistical multiplex signals and transmits the signals to the public ATM network.

In the invention as defined by dependent claim 2, the first and second multiplex gateway devices transmit the transmission statistical multiplex signals by a piece-wise constant bit rate transmission system, which has a piece-wise constant bit rate after the statistical multiplexing process, and which varies in a predetermined time interval.

In the present invention (as defined, for example, by dependent claim 7), a multiplex transmission is effectively performed by re-negotiation to the transmission path.

Conventional image transmission terminals that transmit a variable bit rate image over ATM merely connect to an ATM network independently. Therefore, a statistical multiplex effect cannot be imparted to the image signal that is outputted from a conventional transmitter.

The claimed invention, on the other hand, provides a statistical multiplex transmission system that is capable of obtaining a statistical multiplex effect in an image transmission system including multiple terminals on both ends. The invention can acquire both statistical multiplexing gain and re-negotiation gain in comparison with discrete

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connections between individual terminals of the conventional system (e.g., see specification at page 8, lines 15-24).

II. THE PRIOR ART REJECTIONS

A. Claim 1 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Zhang in view of Duault and Jones.

Applicant's remarks submitted in the Amendment under 35 U.S.C. § 1.111 filed on May 28, 2003 and the Amendment under 35 U.S.C. § 1.116 filed on July 29, 2004 are incorporated herein by reference, for the Examiner's convenience.

In the "Response to Arguments" of the present Office Action, the Examiner states that Jones has been applied in the rejection of claim 1 "to provide a reason for implementing the statistical multiplexer of Zhang in a network according to Duault. Duault has provided only ATM switches at the interface of public and private ATM networks. Jones discloses a benefit for statistically multiplexing multiple subscribers onto a transport network, an improvement over simply switching subscribers onto the public ATM network of Duault. Zhang provides a statistical multiplexer for performing the beneficial statistical multiplexing suggested by Jones. The addition of extra equipment to the system resulting from a combination of Zhang and Duault is irrelevant, and independent from the economic benefit promoted in Jones (col. 6, line 61 - col. 7, line 4) and used as the motivation in this combination. As stated in the previous rejection, Jones discloses the features of ABR, VBR, and CBR, well known in the art as ATM features. Although Applicant states that these features can be used with DSL, as disclosed in Jones,

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it is obvious to provide the beneficial statistical multiplexing of ABR, VBR, and CBR connections in the ATM network of Duault by using a statistical multiplexer of Zhang" (see Office Action at pages 2-3, numbered paragraph 3; emphasis added).

For at least the following reasons, Applicant respectfully disagrees with the Examiner's position.

Contrary to the Examiner's position, Applicant respectfully submits that Jones does not (and cannot) provide the motivation or reason for "implementing the statistical multiplexer of Zhang in a network according to Duault" as alleged by the Examiner.

For example, the Examiner alleges that "Jones discloses a benefit for statistically multiplexing multiple subscribers onto a transport network, an improvement over simply switching subscribers onto the public ATM network of Duault". The Examiner also alleges that "Zhang provides a statistical multiplexer for performing the beneficial statistical multiplexing suggested by Jones" (see Office Action at pages 2-3, numbered paragraph 3).

However, Applicant respectfully submits that the Examiner cannot ignore the contrary teachings of Jones, which clearly contradict the alleged combination. That is, when taken as a whole for what it fairly would have taught to an ordinarily skilled artisan at the time of the invention, Jones teaches away from the alleged combination.

For example, Jones specifically states that "[a]nother approach has been tried to address this need. This approach uses ATM from the network to the customer. This approach requires additional expense per line" (see Jones at column 3, lines 65-67; emphasis added).

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The Examiner cannot rely on the economical benefits disclosed by Jones as the motivation for combining the references, since Jones specifically states that such use in ATM networks “requires additional expense per line” (see Jones at column 3, lines 65-67; emphasis added).

Thus, Applicant respectfully submits that the teachings of Jones, when considered as a whole for what they fairly teach, clearly contradict the Examiner’s stated motivation, and frustrate the purpose of the other references, as well as the invention.

Accordingly, Applicant respectfully reiterates that the Office Action has not established a reasonable motivation for combining the references to arrive at the claimed combination.

Additionally, the Examiner alleges that “*Jones discloses the features of ABR, VBR, and CBR, well known in the art as ATM features. Although Applicant states that these features can be used with DSL, as disclosed in Jones, it is obvious to provide the beneficial statistical multiplexing of ABR, VBR, and CBR connections in the ATM network of Duault by using a statistical multiplexer of Zhang*” (see Office Action at pages 2-3, numbered paragraph 3; emphasis added).

However, Applicant respectfully submits that it is not enough for such features of Jones to be well known in the art as ATM features. The Examiner still must consider the Jones reference as a whole for what it fairly teaches, including those teachings which teach away from the claimed invention.

When considered as a whole for what it fairly teaches to a person of skill in the art, Jones clearly suggests the use of ABR, VBR, and CBR with a DSL system, not with ATM

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since Jones specifically teaches away from the use of ATM from the network to the customer, which would be more expensive (i.e., less economical), according to Jones.

In this case, Applicant notes that none of the cited references individually teaches all of the features of the claimed invention, which clearly has not been done before.

Thus, in order to combine these three (3) references (i.e., Zhang, Duault, and Jones) to arrive at the claimed invention, which has not been done before by any individual references, a reasonable motivation must be established, in light of the teachings of the references as a whole, for combining the references in the manner set forth by the Applicant.

As the Examiner surely knows, merely identifying the individual elements of the claims in separate references is not sufficient to establish the obviousness of the claims. The Office Action must establish a reasonable motivation or suggestion, in the references themselves or in the art in general, for combining the references to arrive at the claimed invention.

Moreover, the mere fact that references can be combined or modified is not sufficient to establish *prima facie* obviousness (see M.P.E.P. § 2143.01). There must be a reasonable motivation to do that which the patent applicant has done.

Further, the references cannot be combined where the references teach away from their combination (e.g., see M.P.E.P. § 2145).

As mentioned above, in discussing ATM, Jones specifically states that approaches using ATM require additional expense per line, and thus, Jones clearly teaches away from the use of ATM. Thus, Jones does not provide a reasonable basis, in combination with

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the other references, for combining these three (3) references to arrive at a system that uses ATM.

Indeed, in attempting to arrive at the claimed invention, the present Office Action “picks and chooses” elements and teachings from among three (3) references, which suggests that the combination is based on impermissible hindsight.

Thus, for at least the foregoing reasons, Applicant respectfully submits that it would not have been obvious to combine Zhang, Duault and Jones to arrive at the novel and unobvious combination of elements recited in the claimed invention. Also, Applicant submits that there are elements of the claimed invention which are not disclosed or suggested by the Examiner’s urged combination of references. Therefore, Applicant respectfully traverses this rejection and requests that the Examiner withdraw the rejection of independent claim 1.

B. Claims 2-7, 9-14, and 16-24 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Zhang, Duault and Jones, and further in view of Grossglauser.

Applicant reiterates that it would not have been obvious to combine Zhang, Duault and Jones to arrive at the novel and unobvious combination of elements recited in independent claims 1, 13, and 20.

On the other hand, Applicant respectfully submits that Grossglauser also does not provide the requisite motivation or suggestion for combining the references. Indeed, Grossglauser is not even relied upon for this reason, but rather, merely to show a renegotiating bit-rate service system and method. Moreover, Grossglauser does not make up for the deficiencies of the claimed invention.

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Applicant also submits that Zhang, Duault, Jones and Grossglauser, either alone or in combination, do not disclose or suggest all of the features of the claimed invention.

For example, in the present invention (as defined, for example, by dependent claim 7), a multiplex transmission is effectively performed by re-negotiation to the transmission path.

Thus, Applicant respectfully submits that claims 2-7, 9-14, and 16-24 would not have been obvious over Zhang, Duault, Jones and Grossglauser, either alone or in combination. Therefore, Applicant respectfully requests that the Examiner withdraw this rejection and permit these claims to pass to allowance.

C. Claims 8 and 15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Zhang, Duault, Jones and AAPA.

Applicant respectfully reiterates that it would not have been obvious to combine Zhang, Duault and Jones to arrive at the novel and unobvious combination of elements recited in independent claims 1 and 13, from which claims 8 and 15 depend.

On the other hand, Applicant respectfully reiterates that Applicant's Admitted Prior Art (AAPA) (i.e., Figure 1) also does not provide the requisite motivation or suggestion for combining the references. Indeed, the AAPA is not even relied upon for this reason, but rather, merely to show the use of H.310 compliant terminal devices.

Thus, Applicant respectfully submits that claims 8 and 15 would not have been obvious over Zhang, Duault, Jones and the AAPA, either alone or in combination.

Accordingly, Applicant respectfully requests that the Examiner withdraw this rejection and permit these claims to pass to allowance.

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D. To summarize, Applicant reiterates that the deficiencies identified concerning ITU-T recommendation H.310 (Broadband audiovisual communication systems and terminals) have not been solved until the present invention.

The claimed invention receives a plurality of variable rate encoded application data streams and creates an efficient multi-channel transmission service using “said first and second multiplex gateway devices” to “receive transmission ATM signals from said first and second local area ATM networks,” and perform “a statistical multiplexing process of said transmission ATM signals to generate transmission statistical multiplex signals, and transmitting said transmission statistical multiplex signals to said public ATM network,” as described in claim 1 (emphasis added).

Methods for preventing data loss and maximizing the use of channel bandwidth do not teach or suggest the claimed invention. Both Zhang and Duault disclose methods to prevent delay and data loss within ATM networks.

The advantages of the novel and unobvious combination of elements of the claimed invention stem from the combination of connecting a plurality of image transmission terminals to a local ATM network, and subsequently connecting to a public ATM network, which also is connected to another local ATM network, where the statistical multiplexing gain and re-negotiation gain are performed, which is in stark contrast to the conventional systems in which image channels are discretely connected one by one between individual terminals.

For at least the foregoing reasons, Applicant respectfully submits that independent claims 1, 13, and 20, taken as a whole, are neither disclosed nor suggested by the alleged

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combination. Applicant respectfully submits that the urged combinations of references fail to disclose or suggest every feature of claims 1-24, and therefore, claims 1-24 are fully patentable over the cited references.

Based on the foregoing, the Examiner is respectfully requested to reconsider and withdraw the rejections.

III. FORMAL MATTERS AND CONCLUSION

With respect to the references (i.e., JP 690236 and 9-8838) cited in the IDS filed on July 24, 2002, the Examiner maintains that a concise explanation of these references has not yet been provided.

However, Applicant respectfully reiterates that, since these references were cited in the foreign Office Action, but clearly not applied by the Examiner, the relevance of these references clearly is apparent (i.e., these references were cited but not applied).

Thus, Applicant respectfully submits that the IDS filed on July 24, 2002, together with the translation of the relevant portions indicating the degree of relevance of the foreign reference cited in the foreign Action/Search Report, fully complied with M.P.E.P. §609 and 37 C.F.R. §§1.97-1.99 regarding the submission of foreign language documents.

Thus, Applicant respectfully reiterates the request for the Examiner consider to the extent possible and to make of record the Japanese references submitted in the IDS filed on July 24, 2002 and listed on the PTO-1449 form.

Hence, the Examiner again is requested to consider and initial the PTO-1449 Form listing each of the references cited in the foreign search report. Also, for the Examiner's

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convenience, a copy of the PTO-1449 Form (as filed with the July 24, 2002 IDS) is submitted herewith.


In view of the foregoing, Applicant submits that claims 1-24, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Respectfully Submitted,

Date: January 28, 2005


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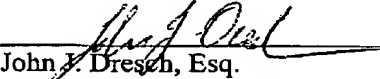
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CERTIFICATE OF TRANSMISSION

I certify that I transmitted via facsimile to (703) 872-9306 the enclosed Amendment under 37 C.F.R. § 1.116 to Examiner Thomas E. Volper on January 28, 2005.


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